

C L A I M S

1. Process for the production of a shaped article comprising the compression of one or more fibre layers containing polyolefin fibres, characterized in that the fibre layers contain 0.02 to 25 wt.% of a solvent for the polyolefin (relative to the total weight of the polyolefin fibres and solvent in the fibre layer).
2. Process for the production of a shaped article according to Claim 1, characterized in that the polyolefin fibres are highly oriented polyethylene fibres having an intrinsic viscosity of at least 5 dl/g and a modulus of tension of at least 800 g/den.
3. Process for the production of a shaped article according to Claim 1 or Claim 2, characterized in that the solvent has been applied by distributing the solvent on one or more of the fibre layers before compression.
4. Process for the production of a shaped article according to any one of Claims 1-3, characterized in that the solvent has been applied as a result of the fibre layers containing solvent-containing polyolefin fibres with a solvent content of 0.02 - 25 wt.%.
5. Process according to any one of Claims 1-4, characterized in that the polyethylene fibres have a fineness of less than 5 denier per filament.

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- 5 6. Process according to any one of Claims 1-5, characterized in that the fibre layers contain unidirectionally oriented fibres and at most 30 wt.% matrix (relative to the total weight of the fibre layer), the direction of the fibres in the fibre layers being at an angle relative to that of the neighbouring fibre layers.
- 10 7. Process for the production of an anti-ballistic shaped article according to any one of Claims 1-6, characterized in that the solvent content is 0.05 - 5 wt.%.
15 8. Process for the production of an anti-ballistic shaped article according to any one of Claims 1-7, characterized in that the chi-parameter of the solvent relative to polyethylene (at 289 °K) is less than 0.5.
- 20 9. Process for the production of an anti-ballistic shaped article according to any one of Claims 1-8, characterized in that the solvent is a non-volatile paraffin.
- 25 10. Process for the production of an anti-ballistic shaped article according to any one of Claims 1-8, characterized in that compression is carried out at a pressure which is higher than 165 bar, at a compression temperature which is higher than 125°C and that the solvent content is 0.05 - 5 wt.%.
11. Shaped article obtainable according to any one of Claims 1-10.

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12. Shaped article containing one or more fibre layers compressed on top of one another, which contain polyolefin fibres and 0.05 to 25 wt.% of a solvent for the polyolefin.
- 5 13. Shaped article according to Claim 11 or Claim 12, characterized in that the SEA on impact of an AK47 MSC point is at least 115 J/kg/m².
- 10 14. Shaped article containing one or more fibre layers compressed on top of one another, containing highly oriented polyethylene fibres and at most 30 wt.% of a matrix material (relative to the total weight of the fibre layer) the fibres in the fibre layers being unidirectionally oriented and at an angle
- 15 relative to the fibres in neighbouring fibre layers, which fibres have an intrinsic viscosity of at least 5 dl/g, a modulus of tension of at least 800 g/den, a fineness of less than 5 denier
- 20 solvent, which shaped article has a specific energy absorption on impact of an AK47 MSC point of at least 115 J/kg/m².
- 25 15. Use of the shaped article according to any one of Claims 11-14 in anti-ballistic applications.

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